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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/730,687	12/05/2000	David J. Gesbert	GW1-105/CIP	9217

7590 06/18/2003

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EXAMINER

MOISE, EMMANUEL LIONEL

ART UNIT	PAPER NUMBER
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2133

DATE MAILED: 06/18/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.
09/730,687

Applicant(s)
Gesbert et al.

Examiner
Emmanuel L. Moise

Art Unit
2133



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on May 12, 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 6 6) ☐ Other:

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DETAILED ACTION

1. Claims 1-20 are presented for examination.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 17 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 17 recites the limitation “ ”said transmitting step” in line 1 . There is insufficient antecedent basis for this limitation in the claim.

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

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A timely filed terminal disclaimer in compliance with 37 CFR 1.321© may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1-20 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-22 of copending Application No. 09/665,149. Although the conflicting claims are not identical, they are not patentably distinct from each other because they relate to communication systems/methods that support multiple modulation and channel coding schemes. It would have been obvious to a person of ordinary skill in the art to implement the claimed invention based on the claims of the copending application because the claims of the copending application as well of the claims of the present application teach to select a channel coding scheme based on channel characteristics which are estimated in terms of variances and mean values.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

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Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

7. Claims 1-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Olofsson et al.

(U.S. Patent No. 6,167,031, hereinafter "Olofsson").

As per claim 1, Olofsson teaches the claimed method of constructing a lookup table of modes for encoding data for transmission in a wireless communication channel from a transmit unit to a receive unit, said method comprising: selecting ... (column 6, lines 50-51); determining a first-order statistical parameter of said at least one quality parameter (the first-order statistical parameter is a mean of a long term quality parameter, see column 6, lines 51-52); determining a second-order statistical parameter of said at least one quality parameter (the second-order statistical parameter is a variance of a short term quality parameter, see also column 6, lines

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51-52); and arranging said modes in said lookup table based on said first-order statistical parameter and based on said second-order statistical parameter (column 6, lines 57-61).

As per claim 2, Olofsson teaches that the first order statistical parameter and the second-order statistical parameter are determined from a simulation of said wireless communication channel (column 5, lines 3-5).

As per claim 3, Olofsson teaches that the first order statistical parameter and the second-order statistical parameter are determined from a field measurement of said wireless communication channel (column 6, lines 49-51).

As per claim 4, Olofsson teaches the claimed invention including; selecting a communication parameter; arranging said modes in said lookup table based on said target value (column 4, line 66 - column 5, line 5).

As per claims 5-6, the communication parameter in Olofsson, which is statistical parameter, is inherently selected from the group consisting of bit error rate, packet error rate, data capacity, signal quality, spectral efficiency and throughput (see e.g., column 7, lines 18-29).

As per claim 7, Olofsson teaches to assign an adjustment to at least one of said first-order statistical parameter and said second-order statistical parameter based on a difference between said measured value and said target value (column 6, lines 57-61).

As per claim 8, the quality parameter in Olofsson inherently comprises a short-term quality parameter.

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As per claim 9, Olofsson also teaches that the second-order statistical parameter is a variance of a short term quality parameter (column 6, lines 51-52).

As per claim 10, Olofsson inherently teaches the variance is selected from a group consisting of temporal variance and frequency variance.

As per claim 11, Olofsson teaches that the short-term quality parameter is selected from the group consisting of signal-to-interference and noise ratio, signal to noise ratio and power level (see column 6, lines 41-42 and column 7, lines 5-7).

As per claim 12, Olofsson teaches that the first-order statistical parameter comprises a mean of said at least one quality parameter, see column 6, lines 51-52.

As per claim 13, Olofsson also teaches that the second-order statistical parameter comprises a variance of said at least one quality parameter (column 6, lines 51-52).

As per claims 14-16, Olofsson inherently teaches the claimed invention including transmitting the data at more than one frequency, in a multi-carrier scheme, wherein said variance is a frequency variance or a temporal variance.

As per claim 17, Olofsson teaches that the transmitting step is performed in accordance with a transmission technique selected from the group consisting of OFDMA, FDMA, CDMA, TDMA (column 6, lines 3-16).

As per claims 18-20, all the other limitations in the claims have already been addressed in the rejection of claims 1-17. Claims 18-20 are therefore anticipated by Olofsson.

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Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

5,559,810 (Gilbert et al.)

6,044,485 (Dent et al.)

6,175,550 (van Nee)

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emmanuel L. Moise whose telephone number is (703)305-9763. The examiner can normally be reached on Monday - Friday from 08:30 a.m. - 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady, can be reached on (703)305-9595. Any response to this action should be mailed to: Commissioner of Patents and Trademarks Washington, D.C. 20231, or faxed to: (703) 308-9051, (for formal communications intended for entry), Or: (703) 305-3718 (for informal or draft communications, please label "PROPOSED" or "DRAFT").

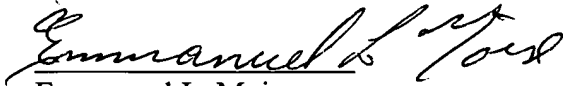
Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington. VA., Sixth Floor (Receptionist). The facsimile phone number for this group is (703) 308-5357.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

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A handwritten signature in cursive script, reading "Emmanuel L. Moise". The signature is written in black ink and is positioned above the printed name.

Emmanuel L. Moise
Primary Patent Examiner
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June 14, 2003